

## ABSTRACT OF THE DISCLOSURE

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A WDM transmission system including a plurality of WDM optical network and a central controller communicably connected to the plural WDM optical network via a plurality of monitor/control lines respectively, the central controller includes variation factor monitoring means for monitoring one or more variation factors of preemphasis on each WDM optical network and preemphasis controlling means for controlling a status of the preemphasis by adjusting the setting for the preemphasis performed on each WDM network via respective one of monitor/control lines. Therefore, preemphasis performed each of the plural WDM optical network can be automatically executed without boosting costs and loads on elements of each WDM optical network. Stabilized transmission of a WDM signal can be performed in each of the plural WDM optical network with ease without manual setting.